

Aglaonema Production Guide

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AGLAONEMA

CFREC-Apopka Foliage Plant Research Note RH-91-2

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Reference to University of Florida/IFAS [Pest Control Guides](#)

Production of Aglaonema has increased in recent years from less than 1% of foliage plant production in the 1960's to more than 6% at present. Originally, *Aglaonema modestum* (Chinese evergreen) and *Aglaonema commutatum* 'Treubii' (ribbon evergreen) were the major cultivars, but many newer cultivars obtained from plant collectors and breeders, have recently become more important.

Table 1: Aglaonema cultivars listed in the 1990-91 Florida Foliage Plant Locator.

A. commutatum	A. commutatum 'Emerald Beauty'
A. costatum	A. crispum
A. 'Abidjan'	A. 'B.J. Freeman'
A. 'Fransher'	A. 'Lillian'
A. 'Manila'	A. 'Maria'
A. 'Romana'	A. 'San Remo'
A. 'Silver King'	A. 'Silver Queen'
	A. modestum
	A. 'Bangkok'
	A. 'Malay Beauty'
	A. 'Parrot Jungle'
	A. 'Silver Duke'

Aglaonema grow best in fairly heavy shade of 73 to 90% (approximately 1000 to 2400 foot-candles) with the highest shade level required where temperatures may exceed 95°F. Excellent growth can be obtained with 3-1-2 ratio liquid or slow-release fertilizer when applied at a rate of 1200 to 1400 lbs N/A/year (equivalent to 28 to 33 lbs N/1000 ft²/year). Micronutrients must be added, especially copper, since a deficiency of this element is common. Potting media utilized must have excellent aeration, as Aglaonema does not grow well in heavy, wet mixes, although ample soil moisture is necessary. Good growth occurs when soil temperatures are 70 to 85°F, with similar air temperatures. Limited growth will occur at 65°F soil temperature, but any lower temperature will result in poor or no growth. Additionally, tissue damage as a result of chilling can occur whenever air temperatures drop below 55°F, mainly on 'Silver Queen', but also on other cultivars at 50°F or below.

PHYSIOLOGICAL PROBLEMS

Reference Pest Control Guides [Here](#)

1) Chilling injury

Symptoms -

Mainly mid to older (lower) leaves develop gray splotches and become chlorotic; lower leaves may collapse after 3 to 7 days if damage is severe. 'Silver Queen' is especially sensitive to cold.

Control -

Keep 'Silver Queen' at least 55°F to prevent damage and most other cultivars 45 to 50°F. The damage is permanent, but damaged plants will continue to grow unless terminals are affected by extreme cold.

2) Copper deficiency

Symptoms -

Terminal leaves become chlorotic and sometimes even dwarfed and deformed, with serrated edges. Older leaves become lighter green than normal and, in severe cases, terminals and lower breaks abort. 'Fransher' is especially susceptible to copper deficiency.

Control -

Apply copper sulfate to soil surfaces at a rate equivalent to 1.5 lbs CuSO₄/1000 ft², or apply copper sprays to foliage. Always include copper in the potting medium e.g. (1.5 lbs Micromax or 3 lbs Per k/yd³) or use a periodic micronutrient application of copper. Soil temperatures of 65°F or below will contribute to copper deficiency, as roots are less able to remove copper from cold soils. Thus, soil temperature should be raised or foliar copper applied during such periods.

3) Excess light and/or temperature

Symptoms -

Leaves assume a more or less vertical or low angle position instead of the normal 45 to 90° angle from the stem. Leaf color will also be light or display a washed-out appearance, and, in extreme cases, leaf tips will be whitish (pale).

Control -

Provide recommended light and temperature levels and leaves will reassume their normal position. Severely bleached leaves may not fully recover.

4) Bent-tip

Symptoms -

The terminal leaf spike will have a fishhook appearance, and some older leaves will also have a hook at the terminal. The new leaf tip appears to be obstructed and caught by the succeeding leaf, resulting in the fishhook appearance.

Control -

Not known at this time, although excessive light and water stress have been observed to

increase severity in susceptible cultivars.

BACTERIAL PROBLEMS

Reference Pest Control Guides [Here](#)

1) Bacterial blights and stem rots (*Erwinia carotovora, E.chrysanthemi*)

Symptoms -

Bacterial blight is typified by watery leaf spots with centers that frequently disintegrate. Bacterial stem rots caused by *Erwinia* spp. are generally first noticed following sticking of cuttings. At this time, the cut end of the stem becomes mushy and foul smelling and the rooting process is delayed if not altogether halted. The cuttings usually yellow quickly.

Control -

Control of bacterial leaf spots or blights can be best accomplished through use of clean propagation material and a watering system that either does not wet the foliage or allows it to dry rapidly. Both antibiotic and copper compounds may aid in control if applied weekly during the summer months when the disease is most severe. Bacterial stem rot is usually not possible to control once started. Use of clean propagation material is the only successful method of cultural control although some growers have reported rouging infected plants and recutting viable ones prior to dipping in Agri-Strep as moderately successful control methods.

2) Xanthomonas leaf spot (*Xanthomonas campestris* pv. *dieffenbachiae*)

Symptoms -

Reddish-brown areas on edges of leaves with bright yellow margins are the most common symptom. Under wet and warm conditions, bacteria also spread into leaf centers and lesions expand until they reach a leaf vein. Sometimes lesions are also small, water-soaked specks which enlarge into irregularly shaped areas.

Control -

Minimize foliage wetting and use pathogen-free stock materials. Foliar applications of copper or antibiotic compounds on a weekly basis provide adequate control under some conditions. Be careful to use appropriate rates of copper compounds since copper toxicity symptoms look similar to those caused by the pathogen.

FUNGAL PROBLEMS

Reference Pest Control Guides [Here](#)

1) Fusarium stem rot (*Fusarium* spp.)

Symptoms -

Fusarium stem rot typically appears as a soft, mushy rot at the base of a cutting or rooted plant. The rotten area frequently has a purplish to reddish margin. *Fusarium* sometimes forms tiny, bright red, globular structures (fruiting bodies) at the stem base of severely infected plants.

Control -

If stem rot or cutting rot is a problem, treatment of the cuttings with a dip or a post-sticking drench should diminish losses. Remove infected plants from stock areas as soon as they are detected. Since Fusarium stem rot appears similar to Erwinia blight, accurate disease diagnosis is very important prior to applications of pesticides.

2) Myrothecium leaf spot (*Myrothecium roridum*)**Symptoms -**

Myrothecium leaf spot is one of the easiest foliage diseases to diagnose. Leaf spots are generally found at wounds, although it is common to find no obvious wound and very large (up to 1 inch) leaf spots. The spots are usually tan to brown and may have a bright yellow border. Examination of the lower leaf surface shows the black and white fruiting bodies of the pathogen in concentric rings near the outer edge of the spot.

Control -

Control can be achieved if plant foliage is maintained dry and wounding is eliminated.

2) Root rot (generally *Pythium* spp.)**Symptoms -**

Root rot is typified by wilting of plants and yellowing of lower leaves. The roots themselves are brown to black, reduced in mass and mushy. The outer portion of infected roots can easily be pulled away from the inner core.

Control -

Use of pathogen-free potting medium and pots, and growing plants on raised benches, can eliminate much of this problem. If fungicides are needed, drenches can aid in control of Pythium or Phytophthora root rot. Since, many times, other pathogens are also involved, accurate diagnosis of the cause must be made prior to choice of fungicides.

INSECT AND RELATED PROBLEMS

Reference Pest Control Guides [Here](#)

Aglaonema does not appear to be seriously affected by insect, mite or related pests, with the possible exception of periodic infestations of caterpillars (larvae) of lepidopterous insects, mealybugs as well as aglaonema and latania scales.

1) Mealybugs**Symptoms -**

Mealybugs appear as white, cottony masses in leaf axils, on the lower surfaces of leaves and on the roots. Honeydew and sooty mold are often present and infested plants become stunted, and with severe infestations, plant parts begin to die.

Control -

Systemic materials are preferred.

2) Scales

Symptoms -

Infested plants become weakened or stunted and begin to die. Scales can be found feeding on leaves, petioles or stems. Their shapes, sizes and colors are variable and many are hard to distinguish from the plant material on which they are feeding.

Control -

See mealybugs.

3) Caterpillars (worms)**Symptoms -**

Infestations are easy to detect because worms, their excrement and the damage they cause, are usually quite visible to the unaided eye. Damage appears as holes in the center or along the edges of leaves. Old damage can be distinguished from new by the calloused appearance of the older damaged areas (worms are usually gone by this time).

Control -

Several acceptable products for worm control are available.

Reference Pest Control Guides [Here](#)

Pesticides should be applied according to label directions.

Regardless of the pesticide or mixture of pesticides used, it is strongly recommended that the effects be evaluated on a few plants, under your particular conditions before treating all plants.

Mention of a commercial or proprietary product in this paper does not constitute a recommendation by the authors, nor does it imply registration under FIFRA as amended.

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